N.A.C.A. BULLETIN

In Two Sections

Section One

COST AND FINANCIAL TESTS FOR THE VETERAN'S BUSINESS ADVENTURE
by PERCY L. PROCTER 499

A COMPANY TRAINING PROGRAM FOR ACCOUNTING PERSONNEL
by JAMES R. EVANS 509

MAKING INDUSTRIAL ACCOUNTING REAL TO THE STUDENT
by GEORGE WILLIAM LAFFERTY 517

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EDITORIAL DEPARTMENT NOTE

New business ventures, large and small, carry a basic interest for most Americans resulting from an inclination to follow suit and a sense that a flow of successful new enterprises spells economic health for the nation. Our first article is directed to the veteran, and perhaps others, who may be contemplating starting or entering a business, and is an invitation to take careful soundings on the basis of a systematic coverage of all applicable cost and financial facts by which the project will be controlled if it is undertaken.

This counsel is offered by PERCY L. PROCTER, who has previously written for the *Bulletin* and has spoken before N. A. C. A. cost conferences. A native of England and a resident of this country since before World War I, Mr. Procter, who is a Certified Public Accountant of New Jersey, was formerly Vice President and Treasurer of Titeflex, Inc., and is now President of Cooperative Industries, Inc., Chester, N. J.

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Interest in the systematic training of industrial accounting personnel has found a place among the policies of larger companies as it has become clear that their cost and general accounting staffs are growing more and more to serve as a nerve center without which little understanding can be had of company operations. A concrete program to train new members of a controller's staff, involving two months of classes and covering an extensive curriculum, is described in the second article in this issue.

The author is JAMES R. EVANS, General Supervisor of the Property Accounting Department of Armstrong Cork Co., Lancaster, Pa., with which he has been connected for a period of some twenty years. Mr. Evans conducted training programs for new employees during the war and later for returning servicemen. He has served his company in a considerable range of cost and general accounting posts, among them Plant Controller and Administrative Assistant to the Controller's office.

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The final presentation in this issue is also on the subject of training for industrial accounting. It takes normal classroom conditions as the starting point and outlines the factors which make it a difficult matter to impart to students the realities of accounting as it is carried on under operating conditions. A considerable number of specific suggestions are made as to methods by which this difficulty may be overcome, in some measure, by cooperation between educational institutions and industrial companies to fortify the accounting instructor's background and material and to bring the industrial picture closer to the student.

GEORGE WILLIAM LAFFERTY, Associate Professor of Accounting at the University of Alabama, is the author of this article, which in large part reflects his own teaching experiences. Professor Lafferty is a graduate of the Wharton School of Finance and Commerce and was instructor in Accounting at the University of Texas at the outbreak of the war, in which he served for four years as a naval gunnery officer.

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COST AND FINANCIAL TESTS FOR THE VETERAN'S BUSINESS ADVENTURE

by PERCY L. PROCTER

President, Cooperative Industries, Inc., Chester, N. J.

IT IS STILL too early to appraise the results of business ventures embarked on by that numerous segment of the present civil population, the veterans of World War II. The partial guarantee by the Government of acceptable business loans made to veterans remains available for a period of ten years from the later of the end of the war or service discharge, and many veterans now continuing their schooling may expect to be numbered among the entrepreneurs of the next few years.

There is a general disposition to wish all such enterprises success, not only in recognition of a contribution to national safety by their owners but also because an influx of small and vigorous business units from any source into the national peacetime picture is accepted as a sign of economic health. However, if one thing is certain it is that many of these adventures of veterans into business will be numbered among the failures as well as the successes. Postwar business seas are necessarily stormy and a severe test for all craft afloat. This paper is directed to the means at hand to test the probabilities of success or failure. Most of these means are rooted in accounting, broadly interpreted. As the veteran wishing to enter business normally either (1) buys a going concern or (2) establishes a new one, the considerations given in the paragraphs which follow take up these two alternatives.

Entrance and Exit Both Easy

First a word about taking the plunge, apart from the detailed appraisal which must be made of the project. It is easy to go into business. All that is needed is the ambition and a little capital and within twenty-four hours you can find yourself floundering in the vast pool of private enterprise, master of your own destiny, if you correctly guess which way to turn toward the safety that lies beyond your horizon, and success, if you can safely navigate the cross currents of business complexities.

It is easy to go into business; it is difficult to stay in business. The desire to set up your own business enterprise is an under-

standable one, but if that desire is dominated by the hope of immediate independence of thought and action, then you are doomed to bitter disappointment. Repack your lunch pail and get back to the old job as quickly as possible. Moreover, hard work, long hours, worry, and very often privation are the toll of business, a toll that you must be prepared to face until success has been established to the point when the luxury of an assistant thoroughly trained in your way of conducting your business can be afforded. The startling increase in the birth of new enterprises stimulated by war activity will doubtless ultimately result in a startling increase in business failures due to competition, high costs, and overexpansion.

About Being Boss

No business man is *ever* independent of his customers. His selling policies and prices are dictated, not just suggested, by his customers, and if this is accepted as a fact, then it must also be accepted that the cost of the product is also dictated by his customers since the cost must be less than the selling price if the business is to survive. Within certain limitations of generally accepted business practice, the customer also dictates the terms of credit and time of payment and discount. Any attempt to change them to the disadvantage of the customer in any trade or industry would be resented. The customer likewise dictates the standard of the product he is purchasing, the manner in which it is packaged, boxed, and marked, the shipping date, route and mode of transportation, and he very often dictates the manner in which he shall be billed.

If this question of independence is to be carried still further, it may be commented that very few business men are independent of their bankers, lawyers, and accountants. Seasonal and short-term financing is often necessary to take care of the peaks of business, even though the business may be adequately financed on the whole and the business man who has never consulted a lawyer or an accountant probably does not exist.

There are no magic rules guaranteeing prosperity and no doctrine, even of the successful business man, which can insure against failure, but there are a few rules of the practical variety which if observed will increase the chances of success. A game of cards requires the player, as the first step, to pick up and look at the cards dealt him. No one can say of a certainty that if they

are played from the table blindly one could not win, nor can anyone say of a certainty that if they are played after due deliberation and in an approved manner, one is bound to win. However, it can be said with deadly certainty that the latter method offers greater possibilities of winning than the former method. The first rule then to observe before entering into the speculative field of business is to evaluate the hand that may be dealt.

The First Weapon—Experience

The graveyard of business is filled by inexperience. Dun & Bradstreet will tell you that the lack of experience in business results in a high mortality. It is essential that you have full knowledge of the kind of business you are about to start or acquire. Retail and service units such as tavern, restaurant, and grocery businesses, etc., and even manufacturing will look very simple and attractive from the customers' side of the counter, but it must not be forgotten that behind the making up of the "front," there exist the men and equipment engaged in the less exciting work of keeping the business going. There must be someone having skills special to the business to guide it and it is best staffed by people who have developed particular skills through a lifetime of work.

It is not enough to have knowledge of one of the phases of the business contemplated even though that knowledge is of a high degree. Although I do not believe it necessary to be an expert in all phases, I do believe it requisite to possess a knowledge sufficient to select the right person at the right moment to bridge any deficiencies. Here are the phases of business which I deem it most important to cover: planning, buying, shop practice, advertising, selling, accounting and finance, public relations, and labor relations. These, with the exception of shop practice and of labor relations, apply to all businesses.

Gauging Capital Requirements

Insufficient capital leads in the financial causes of business insolvencies. The capital requirements of a business are divided into two parts: working capital and fixed capital. Working capital generally consists of cash, amounts due from customers, and inventories of saleable merchandise including, in the case of a manufacturing enterprise, the components and parts from which the final product is made. Fixed capital generally consists of

real estate, buildings, machinery, and furniture and fixtures used in the enterprise.

The capital requirements of a business therefore represent the amount necessary to the conduct of the business, but do not necessarily mean the amount of money or property invested by its owners. Thus, it might be contemplated to purchase a business which showed:

Amounts due from customers	$ 2,000
Inventories	2,000
Real estate and buildings	10,000
Furniture and fixtures	6,000
	$20,000

The total capital requirements would be $20,000. However, if a mortgage were placed on the real estate and buildings for a period of years in the amount of $5,000, while it would not change the capital requirements of the business, it would change the amount of money the new owner must pay from his own pocket. This sum would be reduced from $20,000 to $15,000, the amount of invested capital. However, it is important to keep total capital requirements in mind and not ownership investment only, if for no other reason than that the earnings of the enterprise will go first to pay interest on borrowed capital and an additional portion of the cash on hand will be required to meet principal installments of loans as due. The small business has no access to the bond market and the real estate mortage which is the small business man's method of long-term financing, generally requires a monthly amortization of the principal. I stress the point that a new business should return a satisfactory profit on the owner's investment plus the interest and installment payments on long-term financing.

Purchasing a Going Business

Going businesses are purchased mainly on their earning records. It is of little interest to the prospective purchaser of a going business that the equipment, inventories, and other assets are fairly valued on the books if by the proper utilization of those assets a fair return on the investment is impossible. In the examination of the figures pertaining to the war years, the temptation will be to become too sanguine about the enterprise, for most

business figures were grossly distorted during that period. An examination of prewar operations would disclose results from which opinions far more sound can be formed and an examination of the figures for the postwar period would indicate whether or not the business is still a factor in the trade or industry.

Attention to the earnings record of the business in question should not lead to neglect of its present financial position. The assets of the business should, at market prices, approach very closely the purchase price of the business except in cases where a high rate of profit is clearly indicated and, consequently, a higher value arrived at through the inclusion of good will. In such a case, by excluding the high rate of return, the quick resale values of the assets being purchased should be determined as nearly as possible, for the difference between this total and the amount paid for the business is the portion of the investment that is truly speculative. The question to be determined before making the investment is the ability of the prospective owner to absorb this as a loss without grave injury to himself and his family in case of liquidation of the business.

Receivables, Inventories, Fixed Assets

A complete examination of the customers' accounts should be made. The names of the customers during the prewar years should be ascertained to see whether or not they still remain customers. The accounts of the newer customers are likewise of interest to make sure that they are not of the wartime variety. It should be noted how promptly these customers pay their accounts and, most important, the percentage of business of each customer to the total of the business done. Obviously, if there are one hundred customers on the books and one customer is responsible for ninety per cent of all sales, the business is virtually at his mercy and therefore is not a sound investment.

The inventories must be carefully investigated. Old stock and obsolete parts should not be inventoried. Tests should be made to see whether the inventory is readily saleable, has a good rate of turnover, and does not represent idle capital. This work is one of the fields of the accountant and his services, if practicable to obtain, will be of real value. The examination of the fixed capital accounts, real estate, buildings, machinery, and furniture and fixtures, may require the services of an engineer or an appraiser to determine condition and value. The services of a

lawyer are appropriate to the very important matters of title, bills of sale, etc., and the final contract which cuts the new owner loose from shore and makes him a business man.

Considering a New Enterprise

Starting a new enterprise offers far greater difficulties. It should be born from a public necessity, either for a new product, better quality in an old one at the same cost, the same quality at lower cost, or better service. In other words, it is not reasonable to hope to breach an established market unless advantages not previously available are offered to prospective customers, and the advantages must be significant and real. I strongly advise that veterans eliminate all sentiment from their reasoning and discount completely any expectation of patronage resulting from war service. It is possible, of course, simply to force entrance into almost any field of business by a carefully laid out and repetitive advertising campaign, but the cost of doing this is so high and would mortgage profits for so many years that this method may be dropped from consideration for all practicable purposes.

Sales and Purchase Markets, and Selling Prices

A thorough canvass of the potential market must be made and against this a careful survey of the suppliers of that market must be weighed. If the proposed new enterprise is to sell its product locally, then the market and the supply can be ascertained in a relatively simple manner, but if the market is national in scope it may be necessary to resort to statistics compiled by, say, the United States Department of Commerce and augment this information by a personal survey of the suppliers. It would be well to note particularly the working hours of these suppliers for very often this will indicate the backlog of orders. Thus, if a supplier was found to be operating his factory on a forty-eight hour week basis, one would gather that his backlog of orders was more extensive than if he were working his plant on a thirty-two hour week basis. Many ingenious methods are used and a great deal of time and much money can be expended on a survey of this kind for it is appreciated that the information developed will form the foundation for all future planning and therefore must be sound. The selling price of the product or line comes next in importance and it may be well to state now

that the new businessman will not have much to say about it. Competition is an inexorable leveller of prices, and the public is the final determining factor as to the price it will pay for any commodity.

In the case of a small local enterprise, such as a grocery store, the range is not difficult to ascertain but in a manufacturing enterprise it is essential to know the list price of competitors and also what discounts they allow to distributors and jobbers, etc. The plan in general use by manufacturers is to adopt a list price representing a retail price for the commodity and to give a discount, say fifty per cent or fifty and ten per cent, to distributors. If entrance to a competitive manufacturing field is sought, it is essential to know the list prices of competitors and the trade discounts they allow.

Approach to Costs

The all-important matter of computing costs becomes more complex with the increase of the amount of labor intervening between the purchase of materials or components and completion of the finished product. For instance, if electric irons are purchased from a jobber and sold at retail, cost is very well established. If all the parts of the electric iron are bought and assembled, costs would not be so easy to determine and would be subject to greater fluctuations. If the parts are manufactured, as well as assembled into finished irons, the costs would be far more difficult to ascertain with accuracy. The matter of costs must be considered with great care, particularly if there exists a temptation to enter a line of business in the belief that competitors' costs and, therefore, prices, are excessive. Cost of doing business is generally fairly well established in each particular line, especially among those companies having long careers, and the person who enters business competitively against such companies in the belief that he can operate more cheaply will, unless he has the knowledge that only experience can bring, pay dearly for his venture.

Material Costs

The bill of material in a manufacturing enterprise will include all the raw material and parts and components necessary to the finished product, a simple matter in certain cases of manufacturing. If the bill of material must be ascertained from blueprints, I advise not only that this be done by a competent engineer, but

also that it be thoroughly checked by a methods engineer and priced by a person skilled in materials procurement. The question of selecting vendors must be undertaken and a canvass made to ascertain whether or not the necessary materials are in fact available, and the time required by the vendor to make deliveries. Lest it be forgotten by all concerned, I would like to lay stress on including an allowance for spoilage, rejects, or scrap as part of the material cost. Such an allowance may be minimized as operations grow more efficient but it will always remain an item of cost and one which must be closely governed.

Productive Labor

When I speak of productive labor costs, I mean labor that can be accurately measured against the product and advances it toward completion. Cost estimates for labor must be computed operation by operation, timed and priced by a person skilled in estimating and time studies, and checked by a practical shop man. It must not be forgotten that different standards of work call for different standards of pay and that different crafts prize their prerogatives highly. For instance, you would probably experience considerable difficulty in persuading a toolmaker to sweep the floor during his idle time, at least at a different rate of pay. The point is worth noting for economical production must be calculated in cycles of an ordinary man day production, and planning as to labor personnel and related costs and working capital must be so guided.

After completing the estimate of labor costs, it is in order to submit it to a practical shop man for a check to disclose the necessity for minor operations which have a habit of creeping in unnoticed between scheduled operations. It may be that these minor operations are so small that they cannot be classified as productive labor. However, they will show up in overhead and it is best to make a note of them promptly. It is possible also that the shop man will not agree with the estimate of production per man hour. There is a great deal of difference between the theoretical time to complete an operation and the actual time which will be shown by adequate cost records. Achievement of seventy per cent of theoretical production output would be a fortunate result. In any event, it is necessary to be guided by those who know the practical side and to keep optimism under control. In this connection the matter of spoiled work, reworking, rejects, etc., deserves especial thought.

Overhead

It is a common but thoughtless form of optimism for the individual entering business to imagine that he is operating substantially without overhead except his own time. Only the experienced realize that overhead, both factory and general, embraces the major portion of all operating expenses, is most difficult to control, and that lack of close supervision will soon allow it to overwhelm the whole enterprise. The economic minimum production capacity of any business is fixed. Therefore, before it is undertaken to compute overhead, this minimum must be determined and can be determined by stating productive labor in terms of man days, not man hours, since it is not possible to only pay half wages when regular employees do not have full work. Starting from this point, the overhead may be computed for each successive production cycle.

The first element of overhead to consider is the carrying charges on the cost of machinery which is involved in the costing of machinery necessary to each cycle of production. This cost must include installation complete with power-wiring, air, water, steam and waste lines when these are necessary, and also the first tooling cost. The carrying charges will include depreciation and repairs or rental if the machines are acquired on that basis. The second item in the overhead category is the cost of housing, which necessitates a scale drawing of machinery and equipment and advantageous placement, including the very important space for lavatories, aisles, shipping room, storeroom, and offices. This costing must be done for each cycle of production.

It is impossible to enumerate every item of overhead expense. Many will be peculiar to the individual business, but that is but an added reason why great care and study should be expended in rounding up this most elusive of all classes of business expenses. A few reminders may be in order, some having to do with items which will be encountered generally and others more closely related to special situations. Among the former are supervision, storeskeeping, shipping, trucking, and retooling. They include (to give concrete instances of items) cartons, crates, gasoline, oil, tires, depreciation on trucks, etc. Repairs of all types will crop up. There may be remodeling expense, wiring, and lines for steam, water, and air, and the related costs are better determined early than late. There will be real estate taxes if the premises are owned, and personal property taxes and insurance in any case. Selling expenses

will be very likely to include commissions, travelling expenses, and advertising, and may include catalogues and promotional material. The cost of insurance should be simple to determine with the aid of the figures already compiled and the advice of someone skilled in insurance matters. However, do not forget to add compensation insurance under this general heading, and when you have determined the extent of your inventory, the insurance on this asset must also be included.

To Venture or Not to Venture?

With the completion of cost estimates, it is now in order to determine the production cycle most advantageous and hence to proceed with the determination of the capital necessary if the business is actually to be started. The inventory requirements will be determined from the bill of materials previously mentioned, after due allowance has been made for latitude in the delivery promises of prospective vendors. The desirable condition for accounts receivable may be determined from estimated sales, allowing seven weeks' sales to guard against slow payment of accounts. Cash forecast should provide at least enough to operate one full month. The total of inventory, accounts receivable, and cash requirements represents the working capital and this total together with the investments in fixtures, machinery, equipment, and building, represents total capital requirements and a comparison of this with estimated net profits after income taxes, which must not be forgotten, will readily show whether such a capital outlay can be supported. This reasoned conclusion, with all sentiment set aside, should be the guiding factor in the final decision.

COMING ARTICLES

In the *N. A. C. A. Bulletin*, January 15, 1948

Interlocking the Sales Forecast with Production Planning
by David M. Rush

Measurement and Control of Indirect Labor
by Earl V. Hopton

Uses of a Parts Classification Code
by Marion H. Simpsen

A COMPANY TRAINING PROGRAM FOR ACCOUNTING PERSONNEL

by JAMES R. EVANS,

General Supervisor of Property Accounting,
Armstrong Cork Co., Lancaster, Pa.

THE PRINCIPAL purpose of this paper is to present the scope and some of the details of a plan, which is in practical operation, of training new accounting employees. The plan presupposes no industrial experience on the part of the trainees but a degree of general knowldge and training approximating that usually afforded by a college education. However, since the problem of training selected new employees is only one segment of the problem faced by companies in making sure that all accounting employees are making the most of their capacities for themselves and for the company, it may be helpful to allow this larger area to share initial attention. The war years saw so much on-the-job or perhaps just-before-the-job training, not wholly restricted to manual skills and extremely successful in terms of achieving the then unprecedented volume of production called for, that there would seem no good reason to lose any portion of training technique associated with actual employment that can be put to peacetime purposes.

Educational Facilities Available

In addition, an inventory of educational facilities available to novices and veterans alike in the industrial accounting field will disclose that they include those offered by the company and by educational institutions and those of the strictly self-help variety. The individual responsible for the directing, training, or supervising of accounting personnel in any company, should know the educational opportunities available in his community and should recommend the proper course or other method when the need can be discerned. The principal sources of such opportunities, apart from full-time study, may be listed as follows:

1. Company conducted courses in accounting.
2. Company conducted meetings in which trained men present lectures on the accounting processes.
3. Specialized courses conducted by the extension divisions of larger schools, usually offering certificate credit. These

courses are presented locally by local instructors under direction of the parent school.

4. Educational programs such as the study groups conducted by the local chapters of the N. A. C. A.
5. Correspondence courses.
6. Self-study of books and periodicals.

Nature of a Company Program

The remainder of this article is devoted to the particulars of one company's program to maximize the usefulness of accounting trainees. As might be expected, it combines the features of items numbered 1 and 2 in the above list. The objective is to help each trainee to bridge the gap between the theory he has learned in school and the actual application in the field, and to avoid the "sink or swim" method of immediately placing the new employee on the job with only a short period of instruction given by the vacating incumbent. A program which is carefully and systematically put together to acquaint the new employee with the policies and personnel of the company provides basic training through which to correlate accounting principles and theories and the process of the large, departmentalized business.

Coverage of the Training Program

The coverage of the program includes (1) what the controller's office does, (2) how it is done, (3) why the methods in use are followed, and (4) whether or not they can be bettered. The place occupied by the controller's office is described as to (1) line organization and responsibility, (2) functional responsibility, (3) personnel administration, and (4) long-term training. Emphasis is placed on the role of the industrial accountant and the way in which it applies the science of economics and accounting, blends the art of business management, and is established as a profession. As further guidance to the trainee, the point is stressed that an accounting career with the company will be successful in direct ratio to development of a sense of responsibility for the profits of the company, technical proficiency, and ability to render service.

The total time required for the complete program is two months. As each segment of the accounting process is studied, the instructor reports to the training supervisor on the alertness, concentration, participation in discussions, and other personal qualities of the trainee. At the completion of the training course the trainee is assigned to a specific position.

Course Content and Time Allocation

The training program here presented takes the form of nineteen courses of varying length. The lecture method is applied to all of them but is supplemented by other procedures, including on-the-spot observation. The practical aspect of all instruction is further fortified by the fact that the individual instructors are members of the controller's or at least of the company staff. The list given below will provide a quick view of the subjects taken up, their sequence, and the time devoted to each. For all courses except the first three and the last two additional topical detail is given in the closing pages of the article.

	Course Name	*Days*
1.	Company organization and plans for the future	5
2.	Scope and objectives of training program	(½ hour)
3.	Controller's office organization and functional responsibilities	½
4.	Characteristics of company accounts	½
5.	Accounting procedures and research department	1
6.	Payroll, tabulating, and sales analysis department	3½
7.	Budgeting department	1
8.	Factory and district office accounting—general	1
9.	Factory accounting—specific plant	6
10.	Cost accounting department	8
11.	Treasurer's office	1
12.	Accounts payable section	1
13.	Property accounting department	2
14.	Fiscal accounting department	1
15.	Secretary's office	1
16.	Auditing department	1½
17.	Economic cost department	1
18.	Application of accounting principles—case study	4
19.	Review and assignment to position	1
		40

Methods of Instruction

Perhaps the most helpful type of comment which may be made a propos of the list of courses is to give some indication of the teaching methods employed. Beside the lecture basis and class-

INSTRUCTORS' REPORT ON CONTROLLER'S OFFICE TRAINEES

Please complete this form at the conclusion of your part of the training program. Mail to

Name .....

Date .....

What are your impressions of the men you helped train, in respect to the following personal qualities?

	Very high	*Above average*	*Average*	*Below average*	*Poor*
Alertness					
Concentration					
Participation in Discussions					

How long did you have him in class? .....

Signed .....

Comments:

If you think additional comments would be helpful, please use this space for that purpose.

EXHIBIT 1

room discussion, which are in use throughout, observation of the conduct of the work is included as part of the course on payroll, tabulating, and sales analysis as well as the courses on factory accounting, cost accounting department, treasurer's office, and accounts payable department. There are assigned readings of material applicable to the characteristics of company accounts, factory and district office accounting, cost accounting department, and property accounting department. Problem material plays a part in the instruction technique relating to accounting procedures, budgeting, factory accounting, and application of accounting principles. Practice use of forms is rung in to aid instruction on payroll, etc., cost accounting department, and accounts payable. In connection with the auditing department, actual audit reports are reviewed. Charts are used to get across some of the more important points in courses in which organizational relationships are significant. These include controller's office organization, factory and district office, and the fiscal accounting department.

TRAINEE'S SCORING OF CONTROLLER'S OFFICE TRAINING PROGRAM

1. Introductory Week Program — *Score*
   Did this week of training accomplish its purpose of company orientation? _____
   Your comments:

2. Scope and Objectives of Training Program — *Score*
   Presentation _____
   Subject matter _____
   Time allotted _____
   Comments:

(Form provides similarly for remaining courses)

NOTE TO TRAINEE

The answers on this form will be used to develop future Controller's Office Training Courses, just as the course you have now completed has been developed to some extent from the constructive criticism of previous trainees. With this in mind, please answer the following questions in the space provided. To aid us in evaluating, please use the following scale:

5—Excellent—no need for improvement.
4—Very good—some room for improvement, however.
3—Satisfactory, just adequate.
2—Unsatisfactory—definite need for improvement.
1—Hardly covered at all.

Whenever your scoring is less than 5, please indicate why you felt this subject did not merit a 5, and make any constructive criticism you wish. Since these forms will be impersonal, please feel free to make any comments that you believe to be helpful.

EXHIBIT 2

Results and Reports

There are two types of reports which issue from the training program. One applies to the individual trainee and is submitted by each of his instructors. This form, which is shown as Exhibit 1, gives a basis for initial placement of the trainee and, so far as confirmed under actual conditions, the direction of his subsequent progress. The other report is set forth in Exhibit 2 and is made out by each trainee as to each course on its completion. If it is objected that the trainee is not in a position to appraise the courses as required by the form, the response is that it is probably of real importance to know the impression made on him nonetheless. Confused comments on the course may well reflect confused or not well prepared presentations of the subject. The report does form the basis on which the training program is made, through an evolutionary process of small changes, to meet the needs of new staff men more and more completely.

Topical Detail of Courses

In setting out this detail shown below there have been omitted only courses of a general nature, the titles of which give an adequate idea of the purpose, or of a truly specific nature, the contents of which would necessarily be characteristic of each company. The remaining fourteen courses are covered in the order in which they are listed at the start of this presentation.

Characteristics of Company Accounts—Code system used with tabulating equipment, standard costs, budgets, reports to management, centralized records, plant records, trends in company accounting.

Accounting Procedures and Research Department—Duties of the department, purpose and arrangement of the accounting manual, need for accounting bulletins and accounting instructions, terminology, accounting code system.

Payroll, Tabulating, and Analysis Department—Organization of department, scope of work performed, payroll section: organization of section, assignment of clock numbers, hourly rate and employment record, daily time card, time clerk's responsibilities, determining hourly rate of pay, computation and verification of wages and overtime, payroll deductions, other types of payment to employees, method of payment—permanent record, distribution of pay checks, payroll bank reconcilliation, payroll entries; tabulating section: electric accounting machine method, source records, analysis of reports, section personnel, organization, equipment, and records, future possibilities for tabulating applications; sales analysis section: organization and function, sources of working materials, analysis and coding of sales and credits, reports to associations and to our customers, journal entries.

Budgeting Department—Purposes of budgeting, responsibilities for successful budget administration, what the complete budget program includes, production budgets, administrative (commercial) expenses, sales budgets, company forecast of income and profit, financial budgets.

Factory and District Office Accounting; General—Factory accounting: functions of the department, plants of the company, major products and sales divisions through which products are

sold, place of factory accounting in the company, duties of plant controllers; district office accounting: contacts with plants, contacts with general office; domestic and foreign subsidiaries: products—sales areas, internal accounting, relation to parent company.

Specific Plant Factory Accounting—Organization of department, building standard costs: material, labor, plant records-inventory, standard cost-closing, determining factory efficiency, determining expense budget allowances, determining other variances, distribution of variances to commodities, function of the cost analyst, the cost analyst and control reports, plant warehousing and inventory of finished stock, plant shipping procedures.

Cost Accounting Department—Organization of department, functions of department, relation to plant accounting, expense control section: expense control defined, manufacturing expense, normal volume, budget allowances, expense budget reports; expense control vs. standard expense rates; selling expense and its distribution—classes of expense, codes, distribution of standard expense, budget allowances, equalization of expense, charges to sales commodities; commercial expense and its distribution (same detail as selling); valuation of inventories: first in first out, last in first out; inventory control section: inventory control for branches, Jobbed stock-stock consigned to company, consigned stock, inventory balances for insurance, inventory reports for production planning, obsolescence of stock, reporting of physical inventories, change of standards; contract accounting section: scope of work performed, imprest account reports, contract cost accounting, control of cash advances to company travellers, reconciliation of general and imprest bank accounts, development and maintenance of cost records on company owned salesmen's cars; commodity profit and loss: reports to management, growth and development of commodity profit and loss statements, terms used in current reports, development of plant profit and loss report, forecast of profit and loss by commodity.

Treasurer's Office—Credits and collections: general aspects, customer credit analysis, sources of credit information, collections operating procedure of credit department; customer billing responsibilities, procedures, forms, and reports; accounts receivable:

responsibilities, procedures, forms and reports; claims and adjustments: functions, source of information, handling of complaints.

Accounts Payable Section—Organization and function of section, duties of schedule clerk, invoice clerk, extension clerk, control clerk, disbursement control clerk, cash control clerk, check typist clerk, cross index clerk, file clerk, receiving entry clerk, vendor statement clerk; reconciliation of accounts payable.

Property Accounting Department—Functions of department, scope of property assets, terminology, sources of information, requests for expenditures, accumulation of costs, analysis of costs, property accounts, depreciation policies, the property ledger, layout blueprints and the physical inventory, determining insurable values, government audit and regulations.

Fiscal Accounting Department—General ledger control accounts, sources of entries—posting medium, preparation of monthly financial reports—parent company-subsidiaries, annual report to stockholders, annual report to tax authorities.

Secretary's Office—Tax functions and procedures, company's insurance, method of determining insurable values for fire and age available, purchasing insurance, principal types of insurance companies, adjustment of losses; insurance accounting: types of insurance, method of determining insurable values for fire and extended coverage insurance, method for determining losses, use and occupancy insurance.

Auditing Department—Objectives of internal auditing department, regular audit program, special assignment, personal qualities required, written audit procedures and instructions, auditors work papers, audit reports, cooperation with the public accountants, effectiveness of the audit program, training aspects of audit department work.

Economic Cost Department—Measurement of successful business, why do businesses fail? management decisions in the conduct of business, definition of economic cost work, examples of economic studies.

MAKING INDUSTRIAL ACCOUNTING REAL TO THE STUDENT

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THIS ARTICLE is designed to provide the practicing accountant and the educator with a means whereby more realistic presentation in the classroom of industrial accounting subjects may be attained. This need, as specifically applied to industrial accounting, can be filled through working arrangements between private industry and educational institutions.

Industrial Accounting Defined

Before progressing further it is believed that the term "industrial accounting," as used herein, should be defined, to place the reader and the writer on a common basis of understanding. Industrial accounting as used includes all those accounting forms, procedures, techniques, and statements needed to control the cost of the processes involved in the manufacture and sale of a product.

In university and college curricula industrial accounting is ordinarily included within the following courses, (1) elementary cost accounting, (2) standard cost accounting, (3) a cost accounting course at an advanced level the titles of which vary widely from school to school, and (4) cost accounting courses beyond the level of elementary accounting which are designed for the introduction of industrial and other engineers to the subject of accounting. These courses include in their make-up the elements of industrial accounting. The term industrial accounting per se does not have a very wide application in college and university curricula.

There is a drastic need for more realistically educated industrial accountants. The industry of the country is facing a period in which severe competition is expected to be encountered. It is the belief of the writer that under such conditions the road to profits lies through the field of cost control *at the production level.* Present methods of education in industrial accounting place too much emphasis on teaching the student the problems involved in statement preparation. More time should be devoted to the detail needed to control activities *at the production level.* If, as has been

advanced, seventy-five per cent of all costs incurred by a company are at the production level, good industrial accounting education should teach the student how to control costs at this level.

Cooperation of Industry a Prerequisite

The development of a program for improving the presentation of industrial accounting in colleges and universities has as its prime requisite willing cooperation from industry. Industry must be willing to give of its facilities, men, and money, in order to assist the educator towards improving his knowledge of the practical problems which face the industrial accountant. In addition, educators must be aware of the benefits to be gained for themselves and their institutions through participation in such a program.

It would be a poor commentary upon practicing accountants if they were to subject education to criticism on the grounds of lack of realism and then fail to provide colleges and universities with an opportunity to improve their abilities to teach realistically in the classroom.

Classroom Problems

Before outlining those means which may be used to more closely relate the presentation of industrial accounting material to the student and the problems of practitioners, the writer will briefly develop the more significant problems which face the university or college instructor.

Presenting the Material

The first problem facing the instructor in industrial accounting is one which is common to all technical educators, the presentation of the material to the student. Material may be presented through the use of lectures which are related to text assignments. In this approach, the instructor relies upon his own outlines of text material supplemented by selected demonstration problems from the text. This is a weak method of presentation because the student is limited to learning from the text book. Most textbooks, primarily because of the limitations of space, utilize numerous academic assumptions which facilitate the presentation of material but do not represent realities.

Another means which the instructor may use to present his material is the preparation of problems to fill the gaps in text material and to emphasize those points of procedure which, in his

opinion, are most important. This effects an improvement in the first method, but is limited in its use by the initiative of each instructor and his understanding of the practical procedures deserving of emphasis in the classroom.

Improved classroom presentation may also be attained—and this is the the focus of our attention—through working agreements between the practitioner and the educator specifically designed to provide (1) an expansion of the educator's practical training, (2) lectures by practitioners on specific topics, (3) classroom problems on specific topics taken direct from industry, and (4) discussion groups with practicing accountants, through which the student may have an opportunity of associating with the practitioner.

Variations Encountered in Practice

Another problem confronting the instructor is the need for reconciling the widely varying practices of industry with the presentation of fundamental principles of industrial accounting in the classroom. The importance of this factor should not be underemphasized. Due to the limitations of time and the numerous subjects which must be covered in the course of a university or college student's program, only a limited amount of material can be presented in a given course.

If the educator fails to reconcile the differences between practice and the classroom, an undesirable condition can result. The instructor may, and often does, pragmatically state a set of facts and apply fundamental principles within his facts. When the student is employed by an industrial concern and observes the wide variations from classroom procedure one of two things happens. Either he begins to feel that his education was wrong or he feels that the practices of the concern he is working for are wrong. Usually the difference lies in the procedures through which classroom principles are applied to the problems of a particular concern.

Familiarity With Industrial Terminology and Processes

The third problem of the classroom to be discussed is the lack of familiarity on the part of the student with the terminology of industry. The student is unable to comprehend the fundamental productive and other processes which lie behind the methods employed in controlling and costing industrial operations. In the writer's experience it has been found that engineering students are the most receptive to the presentation of cost accounting. This

is attributed in a large measure to their basic background in the technical nomenclature of industrial operations.

It is impossible to attain complete realism in the classroom but a much more effective job can be done than at the present time. A greater degree of realism can be attained only through (1) expansion of the practical background of the instructor and (2) association of the student with the practitioner. The succeeding paragraphs of this article will deal with the means through which the educator and the practitioner may correlate the conditions of practice and the facilities of the classroom.

Means of Bridging the Gap

A very serious deficiency in the educational approach to industrial accounting is the lack of practical experience on the part of a good many instructors. The question is: how can these men obtain the practical experience necessary to become fully qualified instructors in industrial accounting? There are presented below some thoughts on the subject for the consideration of both educators and industrial accountants which offer some possible solutions.

Industrial Employment Before Taking Up Teaching

If a person feels that he wishes to follow the teaching profession and has the needed attributes of patience, persistence, and lecture ability, a planned program for preparation should include at least one or two years in actual practice before settling down upon a teaching career. However, most persons do not plan their careers as efficiently as an "apprenticeship" program demands. It is often the case that persons gravitate into their lifetime jobs or their professions. This is as true in industry as it is in the educational profession. Because it is the usual situation, how can the instructor who has little or no practical background obtain a serviceable amount. There are available means other than regular full time employment through which an instructor may build for himself a practical background in the field of industrial accounting.

Sabbatical Leaves of Absence

If an instructor has permanently begun his teaching career, his practical experience may be enhanced through sabbatical or annual leaves of absence to work in industry. In order to assure the success of a program of this type, industrial management *must*

spend considerable time on preliminary planning. It should be decided before the educator on leave is employed just what will be the scope of his work within the concern. If, as is often the case, certain knotty cost problems have come up on which the permanent staff has not had sufficient time to work, these problems may be assigned to the educator. However, it is not sufficient to assign the duties. In addition, accounting management should provide one of its more capable executives to work with the educator until such time as he has become familiar with the problems and procedures of the company. Once sufficient familiarity has been attained, the educator should then be "turned loose" to apply his classroom theories to the practical problems of a particular concern. If this approach is taken, the maximum benefits should be realized by the educator and by the industrial organization concerned.

Summer Leaves

In contrast to sabbatical or annual leaves, the educator may make use of his summer leave period for entrance into industry. Although under present conditions of expansion of educational activities and of accelerated education it is not as easy to obtain summer leave as it once was, a program of this type can be effectively carried out. Arrangements for the entrance of the educator into industrial practice should be effected well before the arrival of the summer leave period. If at all possible, the particular phase of accounting activity in which the educator is to work should be determined at the time arrangements are made for the employment. There also should be selected a particular problem of research. There are many industrial concerns which have problems of accounting control which demand individual research which cannot ordinarily be accomplished in the usual course of daily activity. The selection of the problem to be considered is a task for the top accounting executive.

The various possibilities outlined above for the attainment of practical experience by educators depend upon two things. The educator must be aware of the need for expanding his knowledge of industrial accounting and there must be an interested willingness on the part of companies to participate in such a program. It is the belief of the writer that industrial concerns are at present missing a worth-while opportunity in this field. Able instructors are engaged in educational pursuits because of their desire to

teach. They have minds which are trained to think and which can solve intricate problems with great facility. They fully intend to stay in the teaching profession but, if offered the opportunity to spend part of their time in industry, would quickly seize it. Through a program such as that suggested above, industry could obtain some share in the abilities of these individuals for application to industrial accounting problems.

Selecting Instructors for Industrial Internships

Industry should seek out and encourage any educators who are interested in expanding their knowledge of the practical problems of industrial accounting.

Management of industry should select from among the faculty only those members who have shown by the conduct of their classroom activities an awareness of the need for closer relationships between the university and industry. In addition, management should look for evidence that the educator is capable of carrying out an independent research project. This may be evidenced by master's or doctor's theses or in the publication of articles in periodicals. Under no circumstances should persons be selected for participation in this type of program who have deficiencies in their ability to work with others. An excellent means of selection is through cooperation with the deans of the various schools from which faculty personnel is to be selected. The dean as a rule is able to select those men who would be of the most value to the university and to industry in carrying out the program. Through the experience gained in his work in industry, the educator should become more able to present classroom material which will approach realism. He should become better qualified to turn out students capable of assuming places in industry, and accountants thoroughly aware of the varied means through which the fundamental principles of industrial accounting are applied by practitioners.

Contacts During the Academic Year

In addition to working in an industrial accounting capacity when able to obtain leave from educational duties, the educator has an opportunity of maintaining close relations with industry in the course of the school year. In order to establish these relations there must be present (1) industries near the institution of learning willing to make facilities available and (2) an instructor with

the willingness to contribute of his time outside of the classroom to the development of this program. In order to establish working relations with industry, the instructor must make contacts with industrial personnel.

There are numerous ways through which these relations may result in some practical benefits to the classroom. Some of these are (1) class visits to accounting departments and plants of industrial concerns, (2) joint projects between the educator and industrial activity, (3) assembly of classroom problems based on practices of the firm or firms with which relations are established, (4) study of the application of fundamental principles of industrial accounting within the firm or firms, and (5) arrangements to bring industrial accountants to university classrooms. These are only a few of the potentialities contained in the development of close working relations between practicing industry and educators.

The proposals outlined above have been concerned primarily with the manner in which the educator may expand his own practical background thereby providing himself with the tools with which to add to the realism of classroom presentation. If a program patterned after the lines of the suggestions contained above were to be developed, some real improvements in the presentation of classroom facts to embryo industrial accountants would certainly come about. One of the most significant benefits would be presentation of some of the many practical applications of fundamental principles and the ability to make this presentation adequately would stem from the instructor's closer touch with industry.

Classroom Contacts with Industry

The second phase of correlating industrial accounting education and the practicing field is in the development of programs through which industrial accountants are brought to the classroom and have an opportunity for direct contact with the students. This part of the program is just as important as improving the instructor's background. However, the burden of initiating these contacts rests entirely upon the educators. This position is taken because the practitioner does not ordinarily have the time or the desire actually to offer his services to the educator. There are six means to be considered in this article through which industry may be brought to the student. These are (1) lectures by practitioners, (2) classroom problems based on industrial practice, (3) student visits to plants, (4) discussion forums, and (5) cooperative plans

of education. The paragraphs which follow will outline the manner in which each of the above means can be and have been utilized.

Lectures by Practitioners

This technique for acquainting students with the problems of practice has been in use for a good many years. The writer was first subject to its impact as a student. The impressions gained from listening to these lecturers provided the meat for a great deal of thought and more than anything else provided a concept of the difficulties involved in applying industrial accounting principles in actual practice. In the experience of the writer arrangements for individual lecturers have been made by getting in touch early in the term with various persons in the field of industry and requesting participation in the contemplated program. The needed agreements obtained, it was a simple matter from that point to arrange for room space for the meeting and to assemble and conduct the lecture group. However, there was always a tremendous amount of preliminary work underlying the development of the program. The steps of selecting a topic and deciding on individuals most qualified to make the presentation were not easy, nor was it simple to convince the practitioner desired that his services would make a real contribution to the classroom program. The attempt was to render the burden on the practitioner as light as possible. In all instances the writer has insisted that no preliminary preparations be made for the talk, emphasizing that the desired goal was not to train the student in technical matters, but to acquaint him in a general way with the problems of industry. This could be effectively accomplished by having the lecturer present his own daily experiences, as they came to him, to a round table group.

Classroom Problems Based on Industrial Practice

In order to develop problems of this type the educator must have access to the records of industrial concerns. The primary difficulty involved in working up practical problems to be used in the classroom lies in the educator's lack of basic problem material such as forms, account classifications, and actual techniques. In order to overcome this obstacle the educator must spend time in the offices of industrial companies. Of course, cooperation from the concerns involved must first be obtained. It should be observed that actual data is not needed. All that the instructor requires is

the basic procedural information and the basic forms used in the operation of the accounting system.

If problems based upon actual industrial experiences are to be secured, management must be aware of the benefits to be derived from participating in such a program. It may be necessary to point out to the companies approached the possible gains to their organizations which might accrue from the program. The benefits are very similar to those mentioned in connection with development of the educator's own background of practical experience. Industry can best participate in this phase of realism for the classroom by making available the time of upper-level accounting executives for explanation to the educator of problems peculiar to their accounting procedures. In this manner the maximum knowledge of the firm's accounting may be acquired in the minimum time.

Student Visits to Plants

One of the great difficulties with which the instructor in industrial accounting is confronted is the inability of the average student in a school of commerce to visualize the physical processes which underlie the accounting procedures. There is a means, through arranged plant visitations, by which part of this difficulty may be removed. Once again, industrial operations must exist near the educational institution and industry must be willing to cooperate in such a program.

The writer usually concentrates the interest of commerce students on the operating processes of the plant and minimizes the accounting techniques, which are reserved for the classroom. The important thing for commerce students to gain is an understanding of the magnitude and complexity of industrial processes. When engineering students studying accounting make a plant visit, the emphasis is reversed. The accounting procedures are given most attention and the explanation of industrial processes is less emphasized.

Management can make a real contribution to a successful completion of plant visits. This contribution can be best made through the assignment of adequate guides who are familiar with the operations and are able to explain the various processes. It is important that personnel be selected to act as guides who have the ability to express themselves. It has been found that personnel at the operating level, such as superintendents, are often those most

qualified for the conduct of plant visits. They are the ones who have the "know how" of production processes and can capably explain to the students just what is going on at the production level of the factory or plant.

Discussion Forums

A method through which the practitioner may be brought to the classroom is to be found in the presentation of discussion forums to university students in the form of round table groups. This has some similarity to lectures by industrial accountants but it is perhaps even more susceptible of being used to get across phases of practice. In order to obtain the maximum effectiveness from a program of this type, there must exist a close degree of working cooperation between discussion forum leaders and the university or college instructors participating in the program. The educators should be present at any previous adult forums related to the project and should actively participate in sessions, thereby thoroughly familiarizing themselves with the topic covered. In this manner the educator will be able to lead the way when the discussion forum is presented to his students at a later date. There are outlined below the writer's opinions as to an effective manner of presenting the discussion forums to students.

It is believed that, due to the student's unfamiliarity with the problems of industrial accounting as they apply to specific concerns, the best method of presentation is to conduct the meeting along the lines of a group discussion. In presenting forum discussions to a group ranging in size from 150 to 200 students, the writer has employed a method which seems to work well. A room of adequate size to seat the students is obtained. A public address system with two microphones is set up. The discussion leader is provided with one microphone and a portable microphone is also available so that the questions asked by those persons seated around the leader may be easily heard by the entire audience. The leader presents a brief talk on the subject, ranging from fifteen to thirty minutes in length. Then the meeting is opened to questions. Most of the initial questions asked are of the leading type. That is to say, they are designed to bring out points which are considered of interest in the entire assemblage. It should be noted that the students are invited to participate in the discussion. Their participation is strongly encouraged and experience has shown that once student embarrassment is removed, questions flow rather freely.

Cooperative Plans of Education

Another means for making accounting education more realistic is in the application of cooperative plans here referred to as that type of educational program under which a student works in industry part of his school year and attends school the remainder. Much success has been realized in the engineering field with action of this type. In the field of public accounting several universities have developed internship programs under which students are employed during the busy season by public accounting firms while they are still enrolled at the university. Similar plans could be worked out for those students who are majoring in the field of industrial accounting.

A possible fertile field for cooperative education in industrial accounting is to be found among graduate students working for master's degrees. In this group of students it is felt that joint projects between the student, the university, and industry could be developed for the student's thesis. The question of grants by business units for assisting qualified graduate students in the culmination of their thesis work is one for consideration. Selected topics could be presented to the university by industry for research on the part of graduate students. It would be most beneficial to the student, the university, and the participating industrial concern.

Summary

In earlier pages of this article, the basic problems faced by the instructor in the field of industrial accounting were brought out. Subsequent material was devoted to means through which cooperative effort of the instructor and the practitioner could contribute to additional realism in classroom instruction. The justificatiton of such a program is to be found in the increasing need for trained personnel in the field of industrial accounting, personnel trained along such lines that they will be able to fit into the pursuit of industrial accounting with a minimum amount of adjustment. If a program such as has been outlined in this article is carried out, it should comprise a strong reply to the many criticisms of present-day educational techniques in use in general and industrial accounting. The earnest cooperation of the practitioner is a "must" for the success of such a program. There must also be present a willingness on the part of educators to give of their spare moments in order to guide the development of the program.